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07/18/2006 04:35 PM

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bcc

Subject FW: Phase 2 and 3 Envirocon Work Plan

Good afternoon,

I'm sending this document to you for your information and comment. After my initial review of the work plan, I don't see anything out of place at this time. As I have said before, the plan is pretty ambitious considering that December 2006 is only 5.5 months away. I will attempt to finish up my review by COB on Thursday (July 20th). If you have any input, please let me know before then.

Thanks,

Iver J.

PS...John Pod has the asbestos survey results and is in the process of reviewing those documents this week.

-----Original Message-----

From: Nickel, Jon [mailto:JNickel@ASARCO.com]  
Sent: Tuesday, July 18, 2006 4:07 PM  
To: Johnson, Iver  
Subject: FW: Phase 2 and 3 Envirocon Work Plan

I sent original message to incorrect e-mail address - Jon

> -----Original Message-----

> From: Nickel, Jon  
> Sent: Tuesday, July 18, 2006 11:43 AM  
> To: 'ijohnson@state.mt.us'  
> Cc: 'mbrady@envirocon.com'; Cox, Blaine; Aldrich, Tom  
> Subject: Phase 2 and 3 Envirocon Work Plan

>  
> Iver - Attached please find the Phase 2 and 3 Decontamination and  
> Demolition draft work plan. Please feel free to forward the attachment  
> to  
> those involved at MDEQ and EPA. The attached draft work plan was  
> prepared by Envirocon and follows the same format as was developed for

> the Phase 1 Sinter Plant Work Plan. Please note that the Appendices  
> have not been included with this submittal. As part of my July 14th  
> submittal of the 2006 revised Work Plan (under the Montana Consent  
> Decree) you were already provided with the site layout, asbestos  
> survey, and drainage and cap drawings. Also, the Envirocon Health and

> Safety Plan is similar to the version sent with the Sinter Plant  
> project. We look forward to your approval of the attachment. Pending

> your approval, Envirocon may begin the initial building cleaning so  
> that the aggressive Phase 2 and 3 completion schedule can be met.

>

> Thanks - Jon Nickel

>  
> <<Asarco E Helena Phase 2 and 3 Work Plan \_071806.doc>>

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Asarco E Helena Phase 2 and 3 Work Plan \_071806.doc

**ASARCO East Helena Facility  
Site Work Plan  
Phase 2 and 3 Decontamination and Demolition**

**Prepared for:**

**ASARCO LLC  
and  
Montana Department of Environmental Quality**

**Prepared by:**

**Envirocon, Inc  
3330 NW Yeon, Suite 240  
Portland, Oregon 97210**

**July 2006**

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## **1.0 INTRODUCTION**

ASARCO LLC (ASARCO) and the Montana Department of Environmental Quality (MDEQ) entered into a Consent Decree (Decree), on February 15, 2005, to resolve alleged violations of the Montana Hazardous Waste Act and Administrative Rules of Montana. Section IV of the Decree requires ASARCO to develop and implement a yearly Work Plan designed to remove, store, and properly dispose or recycle all remaining hazardous waste and recyclable materials from identified process units located within ASARCO's East Helena Plant. In accordance with the Decree, this Site Work Plan has been developed to describe the specific decontamination, waste removal, and demolition activities associated with this project.

The ASARCO East Helena Phase 2 and 3 Plant Demolition Project is located at the ASARCO East Helena Lead Smelter facility in Helena, Montana and consists of the removal of select structures within two distinct areas inside the smelter property to top of slabs and grade level, salvage of recoverable assets (scrap metals, process equipment, and recoverable by-products), and grading and temporary capping of exposed surface areas after demolition. The two areas within which the work shall occur are identified as Phase 2 and Phase 3.

The Phase 2 demolition area includes:

- Laboratory
- Drossing Plant
- Bullion Casting
- Speiss Granulation Pit and Loadout Area
- Motor Control Center (MCC) Building
- Blast Furnace Flue (Dross Plant to No.1 Blast Furnace)
- Miscellaneous Associated Structures (pipe racks, outbuildings, etc.)

The Phase 3 demolition area includes:

- Mist Precipitation Building
- Clarifier Building
- 98% Acid Tank
- Dust Bin Building
- Scrubber Tower
- Cottrell Building
- Baghouse Building

## **2.0 SITE INFORMATION**

### **2.1 Physical Site**

The ASARCO East Helena Plant is located in the Helena Valley immediately west of Prickly Pear Creek. The community of East Helena is located immediately to the north. The physical address of the site is:

ASARCO LLC  
100 Smelter Road  
East Helena, MT 59635

The ASARCO East Helena facility is bounded on the west by agricultural property, on the east by Prickly Pear Creek and agricultural property, on the north by Montana Highway 12 and the town of East Helena, MT, and on the south by Prickly Pear Creek and agricultural property. The entire East Helena site covers approximately 141 acres. A site plot plan is provided in Appendix 6.1. The main operational areas and process locations within the East Helena Plant consist of:

- Ore Storage
- Ore Receiving
- Sinter Plant (removed as part of Phase 1)
- Acid Plant
- Blast Furnace
- Dross Plant
- Water Treatment
- Non-Production Areas (laboratory, equipment storage, material storage, and maintenance shops)

### **2.2 Site History**

The ASARCO East Helena Plant (the "Plant") was constructed in 1888 by the Helena and Livingston Smelting and Reduction Company for the purpose of processing ores from local mines. In 1899, the American Smelting and Refining Company, today's ASARCO LLC, was formed with the East Helena Smelter being one of the original units.

The East Helena Plant was a custom, primary lead smelter, which produced lead bullion from a variety of both foreign and domestic concentrates, ores, fluxes, and other non-ferrous metal-bearing materials. In addition to the production of lead bullion, the Plant also produced by-products including sulfuric acid and a copper-bearing material called speiss. The Plant recovered zinc until October of 1982.

In April 2001, ASARCO indefinitely suspended operations at the East Helena Plant. While the production operations at the facility have been suspended, the major structures of the facility are still in place.

### **3.0 WORK SUMMARY**

The work to be performed under this Site Work Plan includes the decontamination and demolition of the buildings listed above under Phase 2 and Phase 3. Solid wastes (less recyclable metal assets) generated during the project will be transported and stored in a designated on site facility that meets 40 C.F.R 265 Subpart DD, Containment Building requirements. The concentrate storage and handling building (CSHB) and Bailey Coverall Building are examples of such facilities. While the CSHB will serve as the principle storage unit for removed waste material, other facilities that meet the Containment Building requirements (Coverall Buildings and Direct Smelt Building) may function as alternate storage locations.

The recyclable metal assets (e.g. steel) that will be generated as part of the Phase 2 and 3 demolitions will be recovered. Solid wastes (such as contaminated debris, asbestos containing material, and lead-bearing residue) and steel that contains excessive amounts of heavy metal buildup will be stored in approved facilities while awaiting further management. The storage of removed material will take place while awaiting construction of an on-site Corrective Action Management Unit (CAMU) Phase 2 Cell. The major work tasks include:

- Utility protection
- Storm water protection and runoff control
- Lead dust removal
- ACM abatement
- Demolition of conveyors, equipment and structures
- Recycle recoverable steel

### **4.0 SCOPE OF WORK AND METHODOLOGIES**

#### **4.1 Mobilization and Set Up**

This first task involves mobilizing necessary personnel and equipment to start the project. The initial phase of mobilization will include those resources required to perform the lead dust removal and building cleaning. Prior to initiating work, Envirocon will establish staging areas, personnel decontamination facilities, exclusion and reduction zones, and traffic control. In addition to these functional support areas, Envirocon will establish office and administrative facilities and other support items such as restroom facilities and equipment maintenance area.

#### **4.2 Utility Isolation and Protection**

All utilities associated with the Phase 2 and 3 buildings will be isolated and disconnected prior to the start of demolition activities. Existing power and water may be used during the dust removal and asbestos abatement phases.

#### **4.3 Storm Water Protection**

In the central ASARCO East Helena plant area, storm water runoff from approximately 28 acres (nearly all paved) is routed to the internal plant water handling system. Storm water runoff does not have the potential to contribute to offsite areas. The Phase 2 and 3 work is situated within this area, which will minimize the potential for water runoff. Storm water and runoff within this area will flow to the plant water system for treatment via the High Density Sludge (HDS) plant prior to discharge into Lower Lake. Potentially impacted drains adjacent to the work areas will be protected as necessary to prevent contaminants from entering the system. Storm water catch basins potentially impacted by this site work plan will be identified and marked. Envirocon will then install appropriate filter units in each of the identified catch basins. The filters will remove the solids while allowing the storm water to continue to the existing storm water containment and treatment system prior to discharge.

#### **4.4 Lead Dust Removal and Building Cleaning**

The removal of lead dust/debris from the interior of the Phase 2 and 3 structures will be accomplished primarily with industrial vacuum(s). Two crews will use manlifts and ladders to access high areas and will work in a top down fashion to vacuum accumulated dust and debris. The intent of the building interior cleaning is to reduce the potential for fugitive dust emissions during the demolition and dismantling phase. This gross decontamination operation will remove the bulk of accumulated dust from within the building. The remaining residues will be managed during the demolition using dust control measures described herein.

The possibility of utilizing water to wash down interior spaces is not likely during inclement weather. However, should weather allow, the use of water may be a more thorough and efficient cleaning method. The use of water will be considered if freezing temperatures are not expected to impact operations and containment and control of water is reasonably manageable. Potentially impacted drains will require protection prior to the use of water.

Waste management storage and disposal practices are not expected to be altered in the event water is used as a secondary building cleaning method. Sludge generation is not expected, even if minor amounts of water are used during the cleaning process. Excessive use of water is not expected to occur, rather water will be used only as a supplement to the primary cleaning method. All water collected in the Phase 2 and 3 areas (either from wash down or through storm water management practices) will be routed to the internal water handling system and treated in the High Density Sludge (HDS) water treatment plant. All waste materials

removed during the cleaning phase will be transported to an approved on-site storage location to await further management.

#### **4.5 ACM Abatement**

IRS Environmental (a licensed abatement contractor) has completed the asbestos survey of the Phase 2 and 3 area and will be providing removal services (including obtaining the required NESHAPS permit) as a subcontractor to Envirocon. A copy of IRS Environmental's asbestos survey is attached as Appendix 6.4

The ACM removal methodology involves protecting perimeter areas with plastic and then removing individual siding panels down to the ground for proper management. Specifically, a 10 - 20 ft. drop sheet will be placed extending from the base of panel surface to work area perimeter. This will serve as containment. Appropriate signage (2" "DANGER ASBESTOS" tape) will be posted in the area to restrict access for non-certified asbestos workers. Prior to removal, each panel of siding will be wet using water. The panels will be detached from the building by cutting each individual bolt with hand cutters or power tools. After the bolts have been cut, each panel will be carefully removed and lowered to the ground using manlifts, forklifts, or cranes.

As the panels are lowered, they will be immediately placed into a double 6ml poly lined dumpster or truck, wetting each panel as they are stacked in the container. All trucks/containers will be sealed with duct tape and or spray glue to create a "burrito wrap" and labeled with "Dangerous Asbestos" stickers. The asbestos waste will then be transported by truck or forklift to the CSHB or other approved storage location to await further management.

ACM related to the demolition of the section of Blast Furnace Flue in Phase 2 will be managed using wet methods. The flue is constructed of brick and mortar, which contains asbestos. The proposed demolition method involves bringing the structure down while controlling airborne particulate with wet methods, including water spray. Once the brick and mortar structure has been dropped, the material will be loaded into a lined dump truck and transported to the approved onsite storage area. The material will be placed on a liner, then covered and labeled with "Dangerous Asbestos" stickers. The cover will be glued to the liner to securely seal the stockpile. All work described will occur with required air monitoring and site control measures including signage.

#### **4.6 Demolition**

Prior to the start of the dismantling operations, all structures designated for removal, will be fully isolated. This work includes, but is not limited to, the physical separation of conveyor belts and housings, ventilation lines, equipment connections, and all utilities (electrical, water, gas, etc.) as described above. This isolation will be completed by mechanical and manual work methods. This will include the use of hot

work activities where the structural connections will be separated by means of a torch.

### **Phase 2 Demolition**

A visual review of all isolated locations will be conducted before any dismantling operations take place. The demolition work will begin with Phase 2 on the Laboratory Building and Speiss structures. These structures will be removed with the use of heavy equipment with specialized demolition attachments. All material generated from this operation will be collected and placed in an on site storage location. Demolition of the Dross Building will commence upon completion of the Laboratory and Speiss Buildings. Work inside the Dross Building will begin with the removal of the furnace and shaker structures. Cleaning inside the Dross Building will be coordinated with these dismantling operations. After the completion of this segregation and collection of materials, the existing vents, conveyors, and miscellaneous structures behind the Dross Building will be selectively segregated and removed. Once an open work area is established, demolition and removal of the Blast Furnace Flue section, as well as the Granulation Pit Tunnel, will be completed. The removal of the Motor Control Center (MCC) Building will follow these operations. After the interior work of the Dross Building is complete, the physical dismantling of the structure will be performed. The Dross Building will be dismantled with the use of heavy equipment with specialty demolition attachments. The steel structure will be brought down in a controlled manner and the steel materials sized and removed offsite for recycling. The remaining concrete walls of the Dross Building will then be broken into manageable sized pieces and taken down to the top of existing grade level.

The remaining small structural material will be collected and removed. All remaining structural steel, piping or equipment that remains above the slab level will be torch-cut flush with the existing slab, and collected and removed from the work zone area. Any remaining debris will be collected and removed as well.

All structural steel will be segregated during the operation and all material deemed salvageable will be sized and loaded onto rail cars or trucks for removal to a recycling facility.

### **Phase 3 Demolition**

The dismantlement work for Phase 3 will take place in conjunction with the Phase 2 operations. As with the Phase 2 work, the subject area and structures will be fully isolated and air-gapped prior to the start of any operations. Phase 3 work will begin in the Scrubber Tower area and Acid Plant Control Room Building. Once cleared, the separation and removal work of the selective conveyors, vents, and support structures will then be completed. During the course of this selective operation, the interior equipment of the Mist Precipitator and Cottrell Buildings will be removed. All material generated from this work will be sized and removed offsite for recycling.

The Cottrell and Mist Precipitator Buildings will then be prepared for dismantling. The structures will be brought to the ground in a controlled manner, sized, and segregated. The material generated will also be recycled.

The Baghouse Building is a concrete structure that will be demolished with a specialty excavator with an extended reach to the top of the structure. The concrete structure will be processed with a unit attached to the excavator, which will prepare and size the concrete while the structure is being brought down. The baghouse demolition will be assisted with multiple units of heavy equipment and the concrete and steel will be segregated for removal to a designated area for recycling. Any remaining structural steel, piping or equipment that remains above the slab level, will be torch-cut flush with the existing slab, collected, and removed from the work zone area. Any remaining debris will be collected and removed as well.

All structural steel will be segregated during the operation and all material deemed salvageable will be sized and loaded onto rail cars or trucks for removal to a recycling facility.

#### **4.7 Backfill, Grading and Cap Installation**

As above grade demolition work is completed in various areas, site debris will be removed, and concrete and rebar will be brought down to the surrounding grade level. Fumed slag aggregate from a nearby onsite stockpile will be transported and used as backfill in areas that are below grade, and placed in areas that require drainage assistance to meet the intent of the proposed drainage plan. Demolition areas that can be completed without damaging the integrity of concrete slabs may be integrated into the drainage plan and minimize installation of the geomembrane cap. Backfill will be completed in adequate lifts to accommodate track walking, wheel rolling, and/or vibratory compaction equipment to minimized settlement. A grade laser will be used to confirm drainage, and a topographical survey will be provided upon completion of the liner installation.

Following backfill activities, a geomembrane cap of 20 mil RPE liner, and 10 oz geotextile will be installed in the demolition areas where storm water may permeate the subgrade. Northwest Linings and Geotextiles will be the chosen subcontractor for this work. They are familiar with the site, and are confident in meeting the requirements of completing this work in late November or early December.

Figures depicting the site drainage and capping plans for Phases 2 and 3 are included as Appendix 6.4.

#### **4.8 Waste Management**

All wastes generated during this project will be placed in an approved on site storage facility. The proposed storage location is the Concentrate Storage and Handling Building (CSHB), but other approved storage building may also be utilized. Waste

materials generated during the building cleaning and demolition will be directly transported to these approved buildings to await further management.

#### **4.9 Recycle/Salvage Steel**

As recovered steel is generated, it will be moved to a recovered metal staging area. This area may be adjacent to the work area or more remotely located depending upon the amount of additional processing needed or the type of equipment needed for the processing. At this staging area, the recovered steel will be "cleaned" as necessary and cut to dimensions specified by the purchaser of the recovered metals. Cleaning will be limited to a gross decontamination of steel to remove loose accumulations of dust and residue and meet the acceptance criteria of the buyer. It is not anticipated that cleaning of steel (beyond the cleaning that occurs in the initial phases of the work) will be necessary to meet the requirements of typical salvage metal buyers. Steel that contains heavily contaminated metals that would require additional cleaning efforts prior to sale will be placed in approved storage facilities for future management. Mechanical separation techniques of lead bearing material from the steel may occur in approved storage facilities but the use of water for this purpose will be prohibited.

Once properly cleaned and sized, the metal will be loaded into trucks or shipping containers as specified by the purchaser for transportation to locations specified by the purchaser.

#### **4.10 Decontaminate Equipment**

Once all tasks included in the scope of work have been completed, the processing areas will be restored to pre-work conditions. This restoration will include the removal of any process residues from the reduction operations and any residual materials generated during the implementation of the scope of work. Demobilization from the site includes the appropriate decontamination of equipment used in implementing the scope of work.

The following procedures are intended to establish guidelines for decontamination of equipment and recyclable materials prior to release from the site. As work progresses, control zones may be altered. It is essential that the process be adjusted as necessary to ensure that:

- Equipment and recyclable metals leave the site free of visible contamination
- Contamination is not spread to other areas on site.

#### **Equipment Decontamination**

Prior to exiting an exclusion zone (EZ), the equipment operator will ensure that the equipment is inspected for visible gross contamination. Visible gross contamination will be removed using shovels and hand equipment as necessary to prevent cross-contamination of the site. If necessary, a low-pressure water hose will be used to remove materials. The water generated from this low pressure washing will be managed in accordance with this Work Plan.

Prior to release from the site, all equipment will be thoroughly decontaminated as necessary to remove visible contamination. Initially, equipment will be brushed free of contaminated materials with brooms. Equipment coming from exclusion zone tasks will be washed, if necessary, with high-pressure hoses. Special attention must be given to mud flaps, wheel wells, tracks, undercarriage, and foot surfaces (cab floor, control pedals, or walking boards). All removed contaminated debris will be collected and placed with other contaminated materials in an approved storage facility. If high-pressure water is used, the decontamination process will be take place in Asarco's car wash and the water will be processed through the plant water treatment system. Any equipment not achieving the visual clearance criteria will again be decontaminated and inspected until visual clearance criteria is achieved. Prior to release, the Project Manager or a designated alternate, shall be responsible for insuring that each piece of equipment (i.e., equipment, tools, generators, etc.) has been sufficiently decontaminated and inspected in accordance this criteria. The final inspection for release will be logged and the log entry documented to the Envirocon Equipment Division. If small equipment or materials are judged as uncleanable, it will not be used outside the Contamination Zone and will be placed in an approved storage location at the end of its usefulness.

#### **Recyclable Metals**

Recyclable metals shall be gross decontaminated and segregated as per visible contamination levels. After sizing, metals observed to have no visible contamination will be moved to a staging area for loading and transport off site to a recycler. Metals observed to contain visible contamination shall be segregated and again decontaminated and inspected. Metals deemed to be non-recyclable due to contamination shall be placed in an approved storage facility for further management.

All hand tools and equipment used for decontamination shall be decontaminated or placed in approved storage facility. Contaminated spoils will be collected and disposed of in the CSHB.

#### **4.11 Demobilization**

Upon completion of the scope of work described above, Envirocon will demobilize all personnel, equipment, and other resources from the site. Temporary facilities such as restrooms, storage trailers and office trailers will be removed. All work areas will be cleaned up with trash, debris and miscellaneous items properly contained and disposed. Envirocon will coordinate with ASARCO regarding the status of all utilities impacted by the project prior to departure. All security passes, badges and/or keys will be returned to owner. A final walk through of all areas will be conducted to ensure the site is left in a condition satisfactory to the owner.

## **5.0 SCHEDULE**

The overall timeframe for completing the scope of work is estimated to be five months based on the following estimates to complete the major tasks listed below:

### **Lead Dust Removal and Building Cleaning**

- 4 weeks

### **ACM Abatement**

- 5 weeks

### **Demolition**

- 10 weeks

### **Asset Recovery and Salvage (including loadout)**

- 8 weeks (concurrent with demolition)

### **Decontamination and Demobilization**

- 1 week

## **6.0 APPENDICES**

### **6.1 Site Layout**

### **6.2 Envirocon Health and Safety Plan**

### **6.3 Asbestos Survey**

### **6.4 Drainage and Cap Drawings**